



Monthly Wholesale Trade

Sales and Inventories

U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

December 1996

BW/96-12
Issued February 1997

Sales. December 1996 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$204.3 billion, up 0.2 percent ($\pm 0.8\%$) from the revised November level and 4.9 percent ($\pm 1.8\%$) above December 1995. The November preliminary estimate was revised downward by \$0.6 billion or 0.3 percent. Among durable goods, sales of electrical goods were down 3.1 percent from November to \$14.2 billion, and hardware, plumbing and heating equipment declined 2.8 percent from last month to \$6.1 billion. Among nondurable goods, sales of petroleum and petroleum products increased 1.3 percent from November to \$17.1 billion.

Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$256.3 billion at the end of December, down 0.6 percent ($\pm 0.5\%$) from the revised November level but 0.5 percent ($\pm 1.6\%$) above last year. The November preliminary estimate was revised downward by \$0.1 billion or 0.03 percent. Among durable goods wholesalers, inventories of motor vehicle and automotive

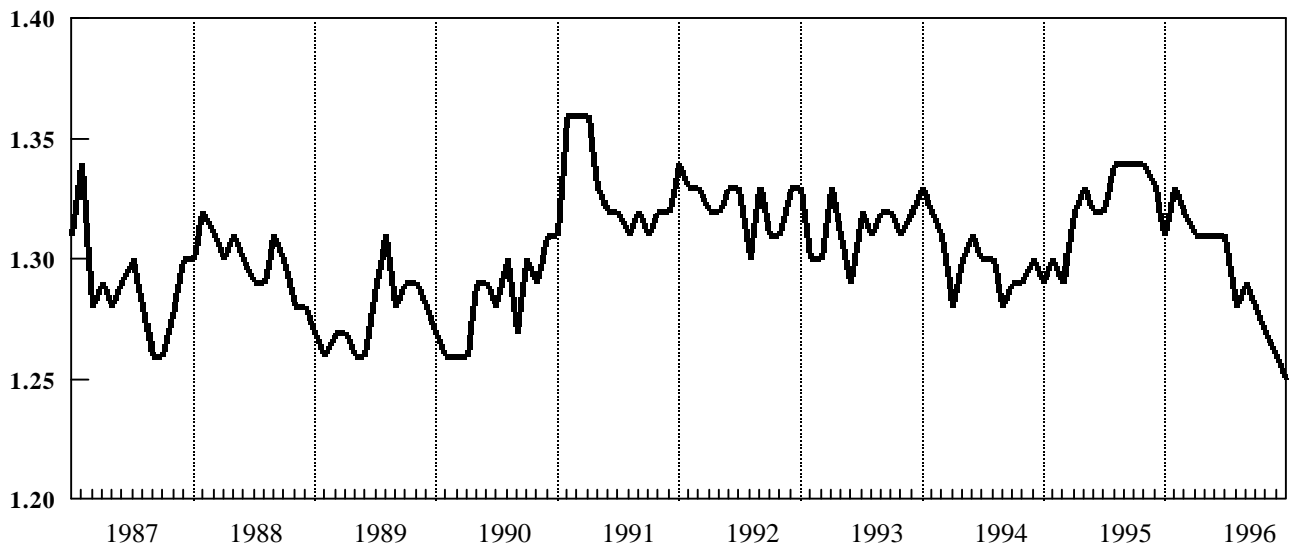
equipment were down 4.0 percent from November to \$26.5 billion, while machinery, equipment and supplies increased 0.7 percent ($\pm 0.7\%$) to \$36.0 billion. End-of-month inventories of nondurable goods wholesalers were down 0.6 percent ($\pm 0.8\%$) from November but were 0.9 percent ($\pm 1.4\%$) above last year. Compared to last month, inventories of farm-product raw materials declined 6.0 percent to \$9.0 billion, while petroleum and petroleum products increased 4.1 percent to \$5.8 billion.

Inventories/Sales Ratio. The December inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.25. The December 1995 ratio was 1.31.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling variability. A discussion of the reliability of the data and general survey methodology appears in BW/95-RV Current Business Report.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1987 to 1996

(Data adjusted for seasonal, and trading-day differences, but not for price changes)



Monthly Wholesale Trade for January is scheduled to be released March 11, 1997 at 10:00 a.m.

Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienchykoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

This report is available on day of issue through the Department of Commerce's online Economic Bulletin Board (202-482-1986). The data are also available on the internet - <http://www.census.gov/svsd/www/mwts.html>.

Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: 1996 and 1995

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change					
		Dec. 1996 (P)	Nov. 1996 (r)	Dec. 1995 (r)	Dec./ Nov.	Nov./ Oct.	Dec. 96 Dec. 95	Dec. 1996 (P)	Nov. 1996 (r)	Dec. 1995 (r)	Dec./ Nov.	Nov./ Oct.	Dec. 96 Dec. 95	Dec. 1996 (P)	Nov. 1996 (r)	Dec. 1995 (r)
Adjusted ²																
	U.S. Total	204,339	203,932	194,839	0.2	0.6	4.9	256,335	257,929	254,963	-0.6	0.1	0.5	1.25	1.26	1.31
50	Durable	104,421	104,549	101,817	-0.1	0.7	2.6	162,436	163,481	161,934	-0.6	0.2	0.3	1.56	1.56	1.59
501	Automotive	17,435	17,038	17,196	2.3	0.8	1.4	26,462	27,576	27,313	-4.0	0.3	-3.1	1.52	1.62	1.59
502	Furniture	3,454	3,558	3,325	-2.9	4.1	3.9	5,070	5,167	5,026	-1.9	0.3	0.9	1.47	1.45	1.51
503	Lumber	7,028	7,083	6,376	-0.8	-1.1	10.2	7,752	8,002	7,589	-3.1	-0.6	2.1	1.10	1.13	1.19
504	Prof. equip.	19,891	19,734	17,155	0.8	2.8	15.9	22,822	22,622	23,044	0.9	2.3	-1.0	1.15	1.15	1.34
505	Metals	8,321	8,537	8,275	-2.5	5.2	0.6	12,691	12,668	12,877	0.2	1.8	-1.4	1.53	1.48	1.56
506	Electrical	14,183	14,633	15,217	-3.1	-0.8	-6.8	23,004	23,118	23,489	-0.5	1.1	-2.1	1.62	1.58	1.54
507	Hardware	6,063	6,239	5,967	-2.8	-0.1	1.6	12,093	12,016	11,114	0.6	1.1	8.8	1.99	1.93	1.86
508	Machinery	15,684	15,692	16,123	-0.1	1.3	-2.7	36,011	35,744	34,974	0.7	-0.9	3.0	2.30	2.28	2.17
509	Other Durable	12,362	12,035	12,183	2.7	-4.0	1.5	16,531	16,568	16,508	-0.2	-3.2	0.1	1.34	1.38	1.36
51	Nondurable	99,918	99,383	93,022	0.5	0.4	7.4	93,899	94,448	93,029	-0.6	-0.2	0.9	0.94	0.95	1.00
511	Paper	7,035	6,930	6,877	1.5	0.4	2.3	8,940	8,881	8,574	0.7	-1.1	4.3	1.27	1.28	1.25
512	Drugs	8,758	8,687	8,163	0.8	1.3	7.3	14,571	14,297	12,837	1.9	1.6	13.5	1.66	1.65	1.57
513	Apparel	6,595	6,454	6,028	2.2	-3.3	9.4	11,091	11,174	12,090	-0.7	-2.6	-8.3	1.68	1.73	2.01
514	Groceries	25,624	25,872	25,831	-1.0	-1.0	-0.8	17,372	17,369	16,248	0.0	-1.0	6.9	0.68	0.67	0.63
515	Farm-products	10,975	10,882	9,662	0.9	3.4	13.6	8,996	9,566	12,068	-6.0	-5.1	-25.5	0.82	0.88	1.25
516	Chemicals	4,422	4,367	4,070	1.3	-2.9	8.6	4,946	5,054	4,696	-2.1	6.1	5.3	1.12	1.16	1.15
517	Petroleum	17,141	16,924	13,603	1.3	4.4	26.0	5,782	5,553	4,933	4.1	2.2	17.2	0.34	0.33	0.36
518	Alcohol	4,574	4,635	4,570	-1.3	0.8	0.1	4,862	4,918	4,591	-1.1	0.3	5.9	1.06	1.06	1.00
519	Other Nondur.	14,794	14,632	14,218	1.1	-1.5	4.1	17,339	17,636	16,992	-1.7	1.6	2.0	1.17	1.21	1.20
Not Adjusted														Sales to date		
														1996		1995
	U.S. Total	202,553	198,904	187,687	1.8	-9.7	7.9	256,938	260,050	256,407	-1.2	0.2	0.2	2,398,671	2,248,649	
50	Durable	102,841	102,253	97,429	0.6	-10.5	5.6	160,393	162,754	160,025	-1.5	-0.2	0.2	1,234,111	1,170,583	
501	Automotive	17,313	16,748	16,663	3.4	-7.6	3.9	25,853	28,072	26,794	-7.9	2.4	-3.5	205,377	198,387	
502	Furniture	3,343	3,611	3,155	-7.4	-6.8	6.0	4,918	5,110	4,890	-3.8	-0.4	0.6	41,365	39,280	
503	Lumber	6,058	6,835	5,343	-11.4	-14.9	13.4	7,667	7,706	7,506	-0.5	0.3	2.1	83,096	75,187	
504	Prof. equip.	20,925	18,925	17,755	10.6	-7.8	17.9	23,050	22,712	23,251	1.5	1.9	-0.9	226,802	191,227	
505	Metals	7,622	7,854	7,373	-3.0	-9.8	3.4	12,881	12,313	13,070	4.6	0.0	-1.4	97,668	99,944	
506	Electrical	13,672	14,604	14,289	-6.4	-12.7	-4.3	22,567	22,933	23,066	-1.6	1.2	-2.2	178,055	172,901	
507	Hardware	5,717	6,158	5,436	-7.2	-12.8	5.2	11,984	11,860	11,003	1.0	-0.4	8.9	72,430	69,089	
508	Machinery	15,606	14,641	15,317	6.6	-10.9	1.9	35,471	35,530	34,449	-0.2	-1.4	3.0	183,767	179,982	
509	Other Durable	12,585	12,877	12,098	-2.3	-12.4	4.0	16,002	16,518	15,996	-3.1	-6.1	0.0	145,551	144,586	
51	Nondurable	99,712	96,651	90,258	3.2	-8.8	10.5	96,545	97,296	96,382	-0.8	0.7	0.2	1,164,560	1,078,066	
511	Paper	7,000	6,674	6,616	4.9	-10.7	5.8	9,137	9,041	8,763	1.1	0.4	4.3	82,530	81,881	
512	Drugs	9,030	8,539	8,016	5.8	-10.5	12.6	15,008	14,440	13,248	3.9	0.5	13.3	100,364	93,284	
513	Apparel	5,368	6,189	4,726	-13.3	-23.6	13.6	11,224	10,783	12,271	4.1	-5.0	-8.5	77,052	71,855	
514	Groceries	25,855	25,872	25,624	-0.1	-6.6	0.9	17,754	17,960	16,638	-1.1	-2.7	6.7	310,462	300,808	
515	Farm-products	11,557	10,621	9,739	8.8	-6.0	18.7	11,002	11,594	14,735	-5.1	8.9	-25.3	127,301	111,492	
516	Chemicals	4,121	4,114	3,655	0.2	-11.0	12.7	4,921	4,933	4,663	-0.2	5.9	5.5	51,806	46,460	
517	Petroleum	17,347	16,569	13,494	4.7	-2.9	28.6	5,880	5,647	5,017	4.1	0.5	17.2	183,018	154,096	
518	Alcohol	5,054	4,802	4,895	5.2	-3.4	3.2	4,488	5,262	4,242	-14.7	-2.5	5.8	55,829	53,633	
519	Other Nondur.	14,380	13,271	13,493	8.4	-12.6	6.6	17,131	17,636	16,805	-2.9	3.2	1.9	176,198	164,557	

p Preliminary estimate. r Revised.

1 For a full description of the SIC Codes shown above see the "1987 Standard Industrial Classification Manual" or the Current Business Reports

"Combined Annual and Revised Monthly Wholesale Trade" publication.

2 Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for seasonal adjustment factors used.

Table 2. Coefficients of Variation and Standard Error for Sales and Inventories

SIC code	Kind of business	Coefficients of variation for level (x 100)				Standard error for trend				Coefficients of variation for level (x 100)		Standard error for trend
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to Year Estimates		Cumulative sales estimates		Current year cumulative to previous
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	CY	PY	year cumulative
		Median	Median	Median	Median	Median	Median	Median	Median			
	U.S. Total	1.5	1.9	1.4	1.9	0.5	0.3	0.9	1.0	1.3	1.4	0.9
50	Durable	2.3	2.8	2.2	2.7	0.6	0.3	1.2	1.4	2.0	1.8	1.0
501	Automotive	3.3	5.4	3.0	5.4	1.7	0.7	2.7	3.1	3.1	3.3	2.2
502	Furniture	12.6	11.5	12.5	10.7	2.5	1.0	4.2	3.5	12.6	10.4	4.7
503	Lumber	3.9	4.7	4.1	4.8	1.2	0.5	3.0	2.5	3.6	6.0	3.8
504	Prof. equip.	7.6	5.6	7.1	5.6	1.9	0.7	4.3	4.1	6.7	6.2	2.8
505	Metals	4.3	5.6	3.9	5.7	1.4	0.6	3.0	3.6	3.8	3.8	1.4
506	Electrical	4.5	4.4	4.3	4.2	1.5	0.4	3.0	2.1	3.8	4.8	3.8
507	Hardware	4.4	5.3	4.2	5.2	1.7	0.7	2.8	3.3	3.8	6.2	4.5
508	Machinery	4.6	5.4	4.4	5.2	1.7	0.6	4.8	3.1	4.3	4.7	1.8
509	Other Durable	5.3	5.0	4.8	4.9	3.2	1.1	4.0	3.4	4.4	6.6	3.6
51	Nondurable	2.2	2.2	2.2	2.2	0.5	0.5	1.3	1.3	2.1	2.2	1.1
511	Paper	5.4	5.4	5.2	5.2	1.1	1.1	2.3	2.3	4.8	4.6	1.8
512	Drugs	7.9	7.9	7.8	7.8	1.5	1.5	3.2	3.2	7.5	8.1	2.1
513	Apparel	6.1	6.1	5.7	5.7	2.5	2.5	5.5	5.5	5.3	6.4	4.6
514	Groceries	3.8	3.8	3.8	3.8	1.2	1.2	2.1	2.1	3.6	3.9	2.1
515	Farm-products	4.4	4.4	4.1	4.1	1.8	1.8	4.8	4.8	3.6	4.1	3.5
516	Chemicals	5.7	5.7	5.4	5.4	2.2	2.2	5.8	5.8	5.1	8.5	6.5
517	Petroleum	8.2	8.2	8.3	8.3	0.8	0.8	2.8	2.8	8.0	7.0	2.8
518	Alcohol	6.1	6.1	6.5	6.5	2.2	2.2	2.3	2.3	6.0	6.6	2.5
519	Other Nondur.	7.0	7.0	6.4	6.4	1.8	1.8	3.4	3.4	5.7	6.9	3.6

Note: The median measures of variability are based on the most recent 6 months of data.

Sample Design and Reliability of Data

There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling.

Sampling errors occur because observations are made on a sample, not on the entire population, and different samples could have led to different estimates. Standard errors and coefficients of variation, as calculated for this report, are measures of sampling variation. The margin of sampling error, as used on page 1, gives a range about the estimate which is a 90% confidence interval. If, for example, the trend estimate is up 1.2% and the standard error is 0.9%, then the margin of sampling error is $\pm 1.65 \times 0.9\%$ or $\pm 1.5\%$, and the 90% confidence interval is -0.3% to +2.7%. If the interval contains 0, it cannot be stated with certainty whether there was an increase or decrease. For monthly level, the coefficient of variation (CV) is given. The resulting confidence interval is the estimated value $\pm 1.65 \times CV \times$ (the estimated value).

Nonsampling errors are usually attributed to many possible sources: (1) coverage error - failure to accurately represent all population units in the sample,

(2) inability to obtain information about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of collection or processing, or in imputing for missing or inconsistent data. Coverage error has an effect on the accuracy of estimates for this survey to the extent that the administrative records system, which forms the basis of our survey universe frame, does not contain all legal businesses. A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For all kinds of businesses combined, imputed data amount to about 26 percent of the total monthly wholesale sales estimates and 28 percent of the total monthly wholesale inventories estimates.

Nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

Official Business

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Table 3. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Sales					Inventories						
		1997	1996				1995	1997	1996				1995
		Jan.	Dec.	Nov.r	Oct.	Sep.	Dec.r	Jan.	Dec.	Nov.r	Oct.	Sep.	Dec.r
	U.S. Total¹	0.959	0.988	0.975	1.085	0.995	0.960	1.022	1.004	1.010	1.007	0.978	1.005
50	Durable	0.937	0.985	0.978	1.098	1.014	0.959	0.999	0.987	0.995	0.998	0.992	0.987
501	Automotive	0.911	0.993	0.983	1.072	0.933	0.969	1.016	0.977	1.018	0.998	0.971	0.981
502	Furniture	0.895	0.968	1.015	1.133	1.040	0.949	0.977	0.970	0.989	0.996	1.019	0.973
503	Lumber	0.875	0.862	0.965	1.122	1.019	0.838	0.996	0.989	0.963	0.955	0.983	0.989
504	Prof. equip.	1.008	1.052	0.959	1.069	1.040	1.035	1.018	1.010	1.004	1.008	0.977	1.009
505	Metals	0.988	0.916	0.920	1.073	0.995	0.891	1.010	1.015	0.972	0.989	0.993	1.015
506	Electrical	0.937	0.964	0.998	1.134	1.074	0.939	0.996	0.981	0.992	0.991	1.012	0.982
507	Hardware	0.895	0.943	0.987	1.131	1.057	0.911	0.980	0.991	0.987	1.001	1.005	0.990
508	Machinery	0.936	0.995	0.933	1.061	0.983	0.950	0.991	0.985	0.994	0.999	0.988	0.985
509	Other Durable	0.913	1.018	1.070	1.173	1.075	0.993	0.983	0.968	0.997	1.028	1.022	0.969
51	Nondurable	0.988	0.994	0.974	1.070	0.972	0.968	1.058	1.033	1.033	1.021	0.956	1.034
511	Paper	1.026	0.995	0.963	1.083	0.996	0.962	1.025	1.022	1.018	1.003	0.960	1.022
512	Drugs	1.071	1.031	0.983	1.113	0.998	0.982	1.078	1.030	1.010	1.021	0.984	1.032
513	Apparel	0.904	0.814	0.959	1.214	1.115	0.784	1.037	1.012	0.965	0.990	1.023	1.015
514	Groceries	0.989	1.009	1.000	1.060	0.972	0.992	1.007	1.022	1.034	1.053	1.009	1.024
515	Farm-products	1.139	1.053	0.976	1.073	0.903	1.008	1.306	1.223	1.212	1.056	0.726	1.221
516	Chemicals	0.978	0.932	0.942	1.028	0.968	0.898	0.983	0.995	0.976	0.978	0.995	0.993
517	Petroleum	1.022	1.012	0.979	1.053	0.960	0.992	0.966	1.017	1.017	1.034	1.028	1.017
518	Alcohol	0.812	1.105	1.036	1.081	0.949	1.071	0.942	0.923	1.070	1.100	1.040	0.924
519	Other Nondur.	0.885	0.972	0.907	1.022	0.953	0.949	1.044	0.988	1.000	0.984	0.922	0.989

r Revised



1 Adjusted sales and inventories data shown in table 1 are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding group. Adjusted data for the totals are obtained by adding the durable and nondurable goods. Seasonal factors shown for the totals will provide an approximation of the adjusted estimates, but may show small differences from the published data.

Note: The seasonal factors shown have been computed based on monthly estimates through the current month preliminary estimates.